WHAT IS CLAIMED IS:

1. A method for reducing total cancer morbidity and mortality in women by adjusting the arsenic level in drinking water to 25-<75 µg/L.

2. A method according to claim 1 when the cancer is lung cancer.

3. A method according to claim 1 when the cancer is liver cancer.

4. A method according to claim 1 when the cancer is bladder cancer.

5. A method according to claim 1 when the cancer is kidney cancer.

6. A method according to claim 1 when the cancer is skin cancer.

7. A method according to claim 1 when the cancer is colon cancer.

8. A method for reducing cancer mortality in men by adjusting the arsenic level in drinking water to 42-60 µg/L.

9. A method according to claim 8 when the cancer is lung cancer.

10. A method according to claim 8 when the cancer is liver cancer.

11. A method according to claim 8 when the cancer is bladder cancer.

12. A method for reducing heart disease mortality in men by adjusting the arsenic level in drinking water to 25-<75 µg/L.

13. A method for not increasing total cancer morbidity and mortality in humans by maintaining the arsenic level in drinking water between 25-<75 µg/L even though such maintenance would violate the newly enacted 10 µg/L upper bound EPA standard.

14. A method according to claim 13 when the cancer is lung cancer.

15. A method according to claim 13 when the cancer is liver cancer.

16. A method according to claim 13 when the cancer is bladder cancer.

17. A method according to claim 13 when the cancer is kidney cancer.

18. A method according to claim 13 when the cancer is skin cancer.

19. A method according to claim 13 when the cancer is colon cancer.

20. A method for not increasing heart disease mortality in men by maintaining the arsenic level in drinking water between 25-<75 µg/L even though such maintenance would violate the newly enacted 10 µg/L upper bound EPA standard.